



A.D. 1853 N^o 2855.

S P E C I F I C A T I O N

OF

PHILIPPE JOSEPH TOUSSAINT BORDONE.

—
EXTRACTING AND TREATING THE JUICE
OF BEET ROOT AND OTHER VEGETABLES.
—

L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

PUBLISHED AT THE QUEEN'S PRINTING OFFICE, EAST HARDING STREET,
NEAR FLEET STREET.

Price 2½*d.*

1854.



A.D. 1853 N° 2855.

**Extracting and Treating the Juice of Beet Root
and other Vegetables.**

(This Invention received Provisional Protection, but notice to proceed with the application for Letters Patent was not given within the time prescribed by the Act.)

PROVISIONAL SPECIFICATION left by Philippe Joseph Toussaint Bordone at the Office of the Commissioners of Patents, with his Petition, on the 8th December 1853.

I, PHILIPPE JOSEPH TOUSSAINT BORDONE, Medical Doctor, residing
5 in Paris, do hereby declare the nature of the said Invention for “ **IM-
PROVEMENTS IN EXTRACTING AND TREATING THE JUICE OF BEET ROOT AND
OTHER VEGETABLES** ” to be as follows :—

In carrying out this Invention the substance to be operated upon is
introduced (either in the form of fresh pulp or previously dried and
10 pounded or reduced to small pieces) into an upright cylindrical vessel
having hemispherical ends, the bottom end being perforated to allow
the juice to flow out. This vessel is provided with a lining or filter of
woollen stuff, similar to those used in working presses, for the purpose
of preventing the fermentation of the juices. This woollen stuff is to
15 be removed after every operation. The vessel having been charged

Bordone's Impts. in Extracting and Treating the Juice of Beet Root, &c.

with the vegetable substance desired to be operated upon, steam is to be introduced at a temperature of from 125° to 130° centigrade, by which means the saccharine particles will be dissolved, and flow out at the bottom of the vessel into a suitable receptacle. The steam being introduced at this temperature will prevent the formation of diastase, 5 and the juice obtained will be in larger quantity and less liable to fermentation than by the processes usually employed.

The juice on running from these vessels is treated with the quantity of milk of lime necessary for its defecation ; it is protected, moreover, from fermentation by a permanent stratum of oil which floats on its 10 surface, and prevents it from absorbing oxygen from the air.

If it be desired to produce alcohol instead of sugar, 20 per cent. of lukewarm bran water must be introduced to the pulp before the introduction of the steam, which will cause fermentation much better than any other known fermenting agents. By this means a great economy 15 will be effected, as the fermentation being more complete there will be no danger of juices being thrown away still rich in sugar and alcohol.

In treating oleaginous matters, the water and steam must be introduced at the bottom of the apparatus, by reason of the lightness of the oil, and another advantage will be gained, viz., that the oil running off 20 with the water will become naturally purified, and will only have to be decanted off.

In operating upon cereals the same advantages will be obtained, and also the further advantages, that in making bread from the residue the operation will be much shortened, as no grinding will be necessary, and 25 the bread will be more digestible and nutritious.

In treating edible substances according to this process a larger quantity of alimentary matter will remain than when the ordinary processes are employed.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1854.